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Medical Library

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The Bristol Medico-Chirurgical Journal

"Scire est nescire, nisi id me
Scire alius sciret."

WINTER, 1927.

THE HOSPITALS OF MADRID: A "BUSMAN'S HOLIDAY."[1]

BY

E. W. Hey Groves, M.S., F.R.C.S.,
Senior Surgeon, Bristol General Hospital;
Professor of Surgery in the University of Bristol.

It would require courage and optimism on the part of a newly-elected President to claim your interest and attention in this full summer tide on a purely professional subject.

I count it as one of the happiest things which ever came to me in my professional career that I was elected a member of the Chirurgical Club. This Society of twenty-five surgeons, representative of all the extra-metropolitan teaching schools of Great Britain, has now visited the majority of the great centres of surgical activity in Europe, and its members have been able to

[1] Being part of a Presidential Address to the Bath and Bristol Branch of the British Medical Association, delivered on June 22nd, 1927.

see foreign methods of operating, teaching and research, and to discuss the merits of such methods with one another.

This year the Club had decided to visit the surgical clinics of Madrid during the week following Easter, and it seemed to me that a motor run through France and Spain offered great attractions which might well be added to the more strictly professional advantages of the trip. Probably most of you have motored in France, and therefore I will speak very briefly of the tour through that country, confining myself chiefly to the Spanish portion of the journey.

From Bristol it is most convenient to travel via Southampton, and we went from that port to St. Malo and returned through Havre. In each case the cross-Channel journey is by night. We arrived at St. Malo at 10 a.m. on April 9th, and were on the road within the hour, after going through the various Customs regulations and filling up with "essence."

It is a curious fact, to which I think all motorists will assent, that the change in the rule of the road presents so little difficulty. One seems to fall in with the new habit as a matter of course, though it is possible that in emergencies, when one is guided by instinct rather than reason, one might be liable to mistakes.

The shortest overland route from the north of France to the Spanish border is from St. Malo to Irun, through Nantes, Saintes and Bayonne, in stages of 122, 130 and 191 miles. Lunch and tea were generally taken by the roadside, making each day into a long picnic. The direct road to the south of France is perhaps a little monotonous, but in the spring of the year it is adorned with all the glories of the trees and fields in their spring-time garb. The French roads have certainly been much improved during the last few years, and many of the

main roads are now tarred. In going south from Bordeaux it is wise patiently to trace out the by-roads advised by the touring agents, so as to avoid about thirty miles of bad *pavé*. In any case the last stage of the journey through France is through the flat country of "Les Landes," a huge pine forest, every tree of which has many cups attached to its trunk to collect the resin.

It was on the morning of April 12th that we crossed into Spain, after making a short detour from Bayonne to Biarritz, and thence through the very attractive town of St. Jean de Luz, which nestles at the foot of the Pyrenees, and has attracted quite a large colony of English.

The Spanish Customs presented no difficulties at Irun, thanks to the papers provided for us by the A.A. We had to buy a local passport which lasted one month, for the sum of 10 pesetas.

The first town in Spain reached by this route is San Sebastian, and it certainly offers a happy introduction to the English visitor. It is a well-built town with esplanade and harbour on the Bay of Biscay, and every kind of modern shop; it also has a fisherman's quarter, where a great trade in sardines is carried on. It is a favourite holiday resort of the King of Spain, who has a modern residence on the sea front. On a recent occasion of political crisis it is said that His Majesty motored from San Sebastian to Madrid, a distance of 317 miles, in one night, and by so doing was able to avert a *coup d'état*.

The first part of the road from San Sebastian to Vittoria is along the sea coast as far as Deva, and it is probably one of the best and most beautiful motoring roads of Europe. It has a good tarred surface with well-engineered curves and tunnels cut in the rock at points of danger, so as to provide a two-way road.

The rocky coast of the ocean is on one side of the road with beautiful verdant hills on the other. At Deva the road goes inland, and our reluctance to say good-bye to the sea was modified by the fact that the road goes up a fine gorge which carries down a rushing torrent and rises by an easy gradient to the Arlaban Pass.

The journey to Madrid was broken at Vittoria and Burgos, and on the homeward trip at Valladolid and Santander. At all of these places the hotels were excellent, with bathrooms generally attached to the bedrooms, willing service and good food. Difficulties in hotel accommodation would arise if through any breakdown it were impossible to reach a large town. We were most fortunate in the weather throughout the entire trip; except for one mountain mist which we went through on the return journey, we had cloudless sunshine the whole time, and heat which was genial without being oppressive. The country between Vittoria, Burgos and Madrid was grand and impressive, and its beauty was much increased by the bright sunshine.

The mountains of the Guadarrama Range, which at that time were snow covered, always gave an impressive background to the picture. The road, with a good surface, wound between many rock-bound gorges and climbed fairly steep passes. Often it was possible to see a distance of twenty miles in every direction, over an undulating country, the red and purple soil being variegated by the green crops. The greatest drawback to the country is the absence of trees, a condition which is said to have been deliberately brought about in order to exterminate the birds which feed upon the crops.

Villages in this northern Spain are quaint and picturesque. They usually lie just off the main road, and consist of a collection of mud-walled houses grouped

round a church, all the buildings seeming to be huddled together for warmth and protection. The country-side gives the impression of great solitude and loneliness. For miles around the eye looks in vain for any house, man or beast. This impression is probably quite illusive; villages are hidden away behind hills and in hollows, and peasants who are quite unobtrusive to the passing motor-car soon make themselves known to the unwary loiterer who sits by the wayside for a meal.

Burgos is the nearest town of any size north of Madrid, which is 150 miles distant. After traversing the many miles of undulating plain, in which human habitation is hardly perceptible, it almost produces a feeling of shock when one suddenly enters the confines of the capital, with the multitudinous trams, buses and motor-cars, its efficient police and highly-regulated traffic.

Madrid is on a great plain over 2,000 feet above sea level, at about the mid point of Spain. It was only made the capital of Spain in the sixteenth century by that Philip the Second who ruled over the Spanish Empire when it was at the zenith of its power, and whose only great failure was his attack on England with the Invincible Armada.

It is therefore lacking in the ancient buildings and historic associations which are found so richly in all the other great cities of Spain. On the other hand, it has all the charm of a modern city, with wide streets, beautiful gardens, modern shops and the great picture galleries, which contain many of the most famous pictures in the world.

The week spent in Madrid itself was the true "busman's holiday." We arrived on April 15th, and the rest of the Club came by rail on the evening of

Easter Sunday, April 17th, rather hot and tired after thirty-six hours in the train. Each day thereafter was spent in a varying round of hospital inspection, sight-seeing, and the enjoyment of great and generous hospitality. Meal-times are usually late—3 p.m. for lunch and 9.30 for dinner—so that the day's activities seldom end before midnight.

For three mornings from 9 to 1 we watched operations in the older hospitals, the Princessa, the University and Madrid School Hospitals. Professor Cardinal and his assistants, Dr. Blanc and Dr. Slocker, did general surgery with a great predominance of gastric work, gastro-enterostomy and the various types of Polya's gastrectomy being performed several times on each of our visits. Dr. Cifuentes did genito-urinary operations, and Professor Recasens, the Dean of the Medical Faculty, gynecological. It would be wearisome if I were to relate details of all these operations, and I will only comment on those special features in the general surgical arrangements which were of particular interest.

It was noticeable that women nurses played a very small part in the surgical work. The Nursing Sisters, who attend all the large hospitals, act chiefly as sick attendants, cleaning the wards and feeding the patients. They take very little part in the operating theatre, except that of fetching and carrying. This state of affairs does not arise from the idea that the surgeons do not recognise the value of trained nurses, but rather from the difficulty of getting enough women of the right class to take up nursing. We actually went over a most up-to-date institute, named after Queen Maria-Christina, which is devoted to the training of nurses, and all the arrangements for lectures and demonstrations and those of the private hospital of which the Institute

is a part were most ideal. The nurses trained in this institute at present only work for private patients and nursing homes.

The medical institution which impressed us most of all was that devoted to the treatment and re-education of injured workmen. It is situated in a country estate on the outskirts of Madrid, and is supported by the State and the insurance companies. The urgency of this need for provision against industrial accidents is emphasised by illustrated propaganda, the text of which reads: "Every minute and five seconds there occurs an accident; every hour, nine minutes and fifty seconds a workman is thrown out of employment; every seven hours, six minutes and fifty seconds a workman is killed; every half second a peseta is lost by an industrial accident."

In the institute every treatment is given to the injured workmen, beginning with surgical reconstructive operation, including some of the finest kineplastic amputations we had ever seen. Artificial limbs are fitted when necessary. When physical restoration is complete, the patient is tested by elaborate psychological reactions, to gauge his or her mentality. Re-education is then undertaken in one of the workshops until the injured person is able to return to the old work, or to earn his living by a new occupation more suitable to his altered condition. The excellence of this ideal and the success with which it is being carried into reality filled us with admiration, and I know that I am voicing the opinion of Sir Robert Jones, who was one of our party, when I say that it is well worth a visit from all interested in the surgical or industrial problems of reconstructive surgery and professional re-education.

Madrid has the same hospital problem to solve that

confronts other big cities, viz. that of the modernisation of old buildings. It has been decided that it would be unwise to try and improve the existing city hospitals, because this would involve great expense, while leaving the hospitals in unsuitable city sites and multiplying general hospitals, each of which would have to be provided with special departments. Instead of this a fine site has been secured on the outskirts of Madrid on high ground which looks right out towards the Guadarrama Mountains. On this there is to be built a University city, which will include a single great University Hospital. The first portion of this new hospital is now nearing completion, and we walked through its wards and corridors with envy in our hearts.

Our Club was greatly honoured by a Royal Command to a reception at the Palace, when His Majesty, King Alfonso XIII., the Queen, who is also an English Princess, and the Queen-Mother, spoke to us each personally, and seemed interested in our impressions of Spain and Spanish surgery.

Of course, we all found an opportunity of witnessing the far-famed bull-fight, which, however objectionable may be some of its features, has an intense and vivid interest. The immense stadium, holding 20,000 spectators, packed to its utmost limit; the gay cavalcade of horsemen and matadors and other fighters who enter and circle round in the brilliant sunshine; the bull-ring empty, save for a few men with scarlet clothes; the door thrown open for the entry of the rampant bull, who soon spies his enemies and makes things lively for them; the appearance of a few sorry, broken-down horses, mounted by picadors carrying short spears; the horrid spectacle of these horses being done to death by the bull, who at the same

time receives the spear thrusts in his neck; the thrilling encounter between the feverishly charging bull and the matador, who leaps aside at the moment when the beast almost has him impaled, and plants his two darts in the bull's neck; the last act, when the espador, armed only with a cloak and a sword, plunges the latter into the bull's heart; and the dragging out of the dead bull by four mules—all these incidents, which have been described by many writers, occupy about half an hour, and the drama is repeated six times during a single performance.

The return motor trip was through Valladolid and Santander, then along the glorious coast road back to San Sebastian, and home through the centre of France and the port of Havre. Certainly for those who want a motor holiday with every delight of scenery and variety nothing could be more enjoyable.

This, then, is an example of what I mean by a "busman's holiday" for a surgeon. Such holidays have been spent in the United States, Canada, and in most European countries. A "busman's holiday" is not a mere joy ride—it also consists in watching how another fellow gets the best out of his bus, how he deals with his traffic problems and brings his fares safely to their destination. In regard to hospital organisation and equipment, good nursing and perfect team work, we have perhaps been most favourably impressed by what we have seen in Canada, Denmark and Switzerland. There we have found hospitals which are just as perfect as modern knowledge knows how to make them—adequate financial support both in regard to capital expenditure and maintenance; all classes of the community, from the richest to the poorest, equally well provided for; medical science placed on the same footing as other branches of learning, so that young

men are trained and selected, men of experience are placed in charge, and the complexities of a great science are served by the best possible team of men working together, both for the discovery of new truth and the best application of knowledge for the cure and prevention of disease.

ACUTE SUFFOCATIVE ŒDEMA OF THE LUNGS.

BY

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WELCH'S[1] theory of the cause of this condition, which according to Osler is that generally accepted, is to the effect that the quantities of blood dealt with by the right and left hearts in any given unit of time must be equal; if not, then there must be a turgescence of either the pulmonary or the systemic circulation. In his words, in acute suffocative œdema "there is a disproportion between the work done by the left heart and that done by the right." If the amount of blood drawn from the lungs through the pulmonary veins is less than that delivered to them through the pulmonary artery, then the condition of affairs in the pulmonary circulation is such as will cause this dangerous emergency. Welch's experimental work on rabbits showed that after compression of the pulmonary veins or massage of the left ventricle so as to produce fibrillation, acute pulmonary œdema sometimes ensued. He was unable to induce the condition by simple compression of the aorta, and therefore argued that, unless there was some pathological change in the left ventricle such as might be brought about by massage

[1] Welch, *American Medicine*, 1904, viii., 195.

of the exposed organ, or direct interference with the pulmonary circulation due to obstruction of the pulmonary veins, the balance between the right and left hearts was maintained, and that direct interference with the left heart might affect that balance.

In the dyspnœic crises under discussion the patient is middle-aged or elderly, and there has been perhaps nothing to cast suspicion on the integrity of the circulation hitherto. Suddenly, and, in those cases which I have seen, towards the end of the day, these patients are taken with extreme dyspnœa, feeling that they are being suffocated by an obstruction in the air passages. On my arrival I have found them always sitting up in bed or in a chair, breathing in an anxious, laboured way, incapable of speech as a result of the dyspnœa and of the embarrassment caused by efforts to spit out a pink frothy mucus welling up from the trachea : the attempts to cough this up are feeble and futile, or non-existent. The gaze is terrified and staring, being with difficulty turned towards one ; the face and general body surface white or grey, and cold with a clammy sweat : there is no cyanosis or venous distension. Here is a condition differing from a sudden attack of asthma in which there is no sputum, and from right heart failure where we are accustomed to see cyanosis and engorgement of the veins of the neck and upper arms. The pulse is usually 100–120, of very small, almost imperceptible, volume. The heart sounds are rendered inaudible by râles throughout the lungs, most numerous towards the bases ; I have not been able to make out any increase in the area of right heart dullness.

When one is confronted with an emergency of this kind, engorgement of the systemic veins, which might be taken as an indication for venesection, a measure recommended by many authorities for this condition,

is seen not to be present. Judged on that basis alone, therefore, this operation would seem to be futile; but a moment's reflection will show that this deduction is incorrect. The veins are not full because, whilst the right heart is passing on the blood from them into the lungs, they are not being fed through the capillaries from the arterial side of the systemic circulation, since the left heart is not delivering enough blood through to them. There is, as it were, a traffic block in the lung capillaries. More blood has entered the lungs by the pulmonary artery than can get through, and a "jam" results, so that the quantities of blood emerging through the left heart and aorta are diminished below the normal; for some reason the balance between the right and left hearts is upset. In fact, to carry the analogy farther, the traffic control has broken down. How it is that this control of balance of output between the two sides of the heart is maintained is a matter of speculation, but perhaps it may be an affair of nervous synchronisation; for many cases of left heart failure of considerable duration are seen where acute pulmonary œdema does not take place (unless perhaps immediately before death), and I would suggest that its absence depends on some nervous inhibitory action controlling the right heart, so that it does not pump too much blood through into the lungs. In the cases I shall quote it seems to be clear that there were considerable degrees of left heart inadequacy without acute pulmonary œdema immediately ensuing. In the same cases, moreover, after repeated attacks of pulmonary œdema, this left heart insufficiency seemed to be even more marked than before, and yet there were no subsequent attacks, so that the right heart must surely have been under the influence of some inhibitory control. It is the sudden cessation of this inhibitory control (if such

there be), together with a weakening left heart, which seems to determine the onset of this condition.

We are therefore faced with the task of attempting to relieve the blood block in the lung capillaries and of controlling the amount of work done by the right heart. Nature makes an effort in the former direction, as is shown by the exudation of fluid through the bronchial tree and its discharge through the trachea, but the respiratory exchange is thereby interfered with, and the patient is in danger of suffocation. By venesection some of the blood entering the jammed lung capillaries is diverted, that is to say, some control is brought to bear on the work being done by the right heart, not very much perhaps, but enough to start the relief of the block. Moreover, this relief is being acquired to some further extent by rendering the exit from the block the more easy through the left heart; for it will be seen that as this block becomes less congested there is evidence of more blood coming through, in that there is an increase of the bleeding from the *distal* end of the incised vein. With the circulation picking up, this gathering stream of blood attains greater dimensions as the left heart passes on the blood from the previously jammed lung capillaries: the traffic control is given an opportunity to reassert itself, and the circulation proceeds in an orderly fashion as before.

In support of this reasoning I have made the following observations on some cases in which I have performed venesection. On looking for a vein in the antecubital fossa it is difficult to locate one, but after the upper arm has been constricted and the front of the forearm massaged upwards, the median basilic can usually be identified at the bend of the elbow. On its exposure by incision of the skin and isolation for the distance of about an inch from the surrounding

structures it appears to be almost empty. After ligatures have been slipped under the upper and lower extremities of the isolated segment the vessel is incised in a longitudinal direction between these. At first blood flows but slowly in dark drops ; one must expect here no sudden gush of blood as in a case of right heart failure. In a little while this drip quickens into a trickle which soon becomes a stream of red blood. In each case I have noted that the discharge comes from the distal end of the vein ; compression of the vessel in the forearm will cause the flow to cease, whereas compression in the upper arm proximal to the incision has no effect.

I have imagined that this acceleration in the venesection flow results from the circulation picking up through the arterial tree and coming on through the capillaries to the vein. The gradual return of the natural pinkness to the previously ashen features, and a flow of healthy colour to the cheeks, also coincides with this return of the capillary circulation to normal. With these changes there comes on a cough which is to be hailed as a good omen ; the breathing is freer and the patient gasps his relief.

The amounts of blood I have drawn off have varied from fourteen to twenty-four ounces. I have allowed bleeding to continue as long as the condition is improving and the pulse gaining in volume and slowing. If it quickens or appears to be losing some of its newly-acquired strength, the bleeding is stopped. By now the patient should be of good colour, able to hold his breath and cough, and lie back against his pillows breathing with tranquillity.

In less urgent cases, in place of venesection I have injected morphine and atropine hypodermically, and relief has been quickly brought about. I suggest that

it is the vaso-depressor action of these drugs which is the important factor in their utility here, but I have not taken a series of blood pressure observations in these cases. Chloroform inhalations likewise have been quoted as a useful remedy.

The following are notes of two cases on whom venesection was practised:—

Case 1.—Mrs. H., aged 71. In the evening of May 30th, 1926, I was called to see this woman, and found her suffering from a typical acute suffocative attack such as I have described. She was cold, grey and almost pulseless, with numerous râles throughout both lungs, and on opening the vein a few drops only of blood was I able to express by massaging the forearm upwards. The flow soon increased, however, from the distal end of the vein, and I ultimately relieved her of a total volume of eighteen ounces. When this had been done she was very much better, and able to lie back in bed and tell me that she had recently survived three similar, but much less severe, attacks, each associated with a blood-stained, frothy sputum.

Next day when I saw her the pulse was regular and strong, 90 in rate, the blood pressure 190, the apex beat $4\frac{1}{2}$ inches from the mid-line, the cardiac sounds weak and tick-tack, but the lungs quite clear.

Case 2.—Mr. S., aged 63, tram cleaner. I attended this man in 1925, when he suffered from auricular fibrillation, the apex beat being in the sixth space and 5 inches from the mid-line. There were no murmurs, and the feet were not œdematous. In 1926, although the fibrillation had ceased under digitalis, he became dyspnœic on any exertion and a systolic murmur was audible at the apex, which I attributed to ventricular dilatation. One evening towards the end of March, 1927, he had an attack of acute suffocative œdema of the lungs. The pulse was 125, regular, and the blood pressure was 210/135. He seemed to be *in extremis*, but, nevertheless, I withdrew forthwith twenty ounces of blood and he at once improved, the pressure falling in these few minutes to 190/110, and the pulse slowing to 107.

He got about, against my advice, during the next few days, and with the subsequent rise in blood pressure to 200/125 another attack, which I thought was going to prove fatal, supervened at 10 p.m., five days after the first one. In addition

to the other signs there were now many extra-systoles. I drew off twenty-four ounces of blood, thereby reducing the pressure to 160/105, and he was much improved, so that next morning the breathing was normal and the lungs free of râles. Unfortunately sepsis set in at the site of venesection, and I had him removed to hospital, where he died, I believe, in a subsequent attack.

In the next two cases, although there were undoubtedly signs of impending attacks of suffocative œdema from time to time, whenever I saw them the conditions did not seem urgent enough to warrant venesection, and I employed other measures to bring about relief.

Case 3.—Mr. P., aged 51, draughtsman. In May, 1925, this man had a sudden paresis of the left side of the body which gradually passed off: there had been a similar transient hemiparesis four years previously.

In August, 1925, he was taken with a sudden dyspnœa just after going to bed; I found him sitting up pallid and sweating, very dyspnœic, with a feeble quick pulse and the chest full of râles, the bronchial exudate rattling in the trachea. I injected gr. 1/100 of atropine and found him next morning to be much better, with a pulse of 84 and the chest clear of râles. The blood pressure was 185/110, there was some albumin in the urine and a marked albuminuric retinitis.

During the course of the next few weeks, just after going to bed, there were several attacks of shortness of breath and "whistlings in the chest," as his wife described them, but neither their severity nor their duration caused her to send for treatment.

Later in the year, against my advice, he tried to resume work, but found that the effort of walking to his office caused such dyspnœa that he discontinued his attempt. I found no râles in his chest one morning when he walked to see me, neither was there any œdema of the feet, and yet there was an extreme dyspnœa, with a pulse of 110 lacking any evidence of respiratory rhythm. This shortness of breath, he said, had come on just before arriving at my house, and he thought it was due to walking a little too quickly. He was not a fat man, and the apex beat could be localised about 4 inches from the mid-line. He now became confined to his house, and hemorrhages appeared in his retinæ.

In the early part of 1926 the attacks of threatened pulmonary œdema became more frequent and severe, so that I was often called to see him towards midnight. The lungs would then be full of râles, a little blood-stained sputum welling from his mouth, but relief always seemed to follow an injection of atropine, so that venesection was not needed, and next morning the breathing would be peaceful and the lungs free of adventitious sounds. He then developed a dry pericardial friction rub over the left ventricle and had precordial pain in these dyspnœic attacks, and a month later died sitting up in bed and gasping for breath before I could get to him, without ever having had any cyanosis or œdema of his legs, as far as I know.

Case 4.—Mrs. G., aged 49. This woman had a hemiparesis in November, 1926, from which she gradually recovered. I subsequently noted that the pulse was alternating, 80 in rate, exhibiting respiratory rhythm, with a blood pressure of 210/150. The discs were œdematous, and there was some albumin in the urine. The Wassermann reaction was negative.

In April, 1927, the blood pressure had risen to 230/160, and there was what I took to be a threatened attack of pulmonary œdema, with râles in the lungs and the typical bronchial exudate, one evening after she had gone to bed. I injected gr. 1/150 of atropine with gr. 1/4 of morphine, and these symptoms subsided in a couple of hours. I noted a few days later that the pulse had become quick (120) and perfectly regular, having lost its respiratory variations; the blood pressure was the same as before.

In May there were two typical attacks of acute pulmonary œdema, which again subsided after atropine and morphine.

In June, when I was seeing her frequently, the blood pressure fell in the course of a few days to 170/140, the heart meanwhile dilating so that the apex beat, which had previously been but little out from the normal, went out to about 6 inches from the mid-line in the sixth space, the pulse being 120 and the heart sounds of the gallop type. A fortnight later I noted that the blood pressure had fallen to 150/115, and a few days afterwards death ensued without another attack of pulmonary œdema, and unaccompanied by cyanosis or œdema of the extremities.

SUMMARY.

1. In acute suffocative pulmonary œdema the blood flows centripetally from the distal end of the

incision in the vein, which is the reverse of that which occurs in venesection for right heart failure.

2. There is no systemic œdema in these cases.

3. In all four cases investigated there was high blood pressure associated with ventricular inadequacy. In support of this contention may be noted the weakness of the heart sounds in Case 1 and the mitral systolic murmur in Case 2, presumably due to a relative incompetence consequent on stretching of the auriculo-ventricular ring from weakening of the ventricular muscle as a whole. In Case 3, likewise, the marked dyspnœa with tachycardia, occurring without any cyanosis or râles in the lungs, was apparently due to left ventricle failure, since nothing else could be found to account for it. In Case 4 clear evidence of left ventricle defeat seems to be established by the dilatation of the ventricle and the accompanying fall in blood pressure, together with narrowing of the pulse pressure.

4. That something more than left ventricular failure alone is necessary to determine the actual onset of acute pulmonary œdema seems to be evident from a study of Cases 2 and 4, for in the former case a relative mitral incompetence was present for some months before an attack of pulmonary œdema ensued, and in the latter case, when the ventricle gave way and the blood pressure was falling, there were no subsequent attacks.

5. The immediate object in treatment is to relieve the distension of the lung capillaries quickly, by diminishing the blood pressure, either mechanically by bleeding or in less urgent cases by vaso-depressor drugs, such as morphine, atropine or chloroform. By these measures the left heart also is automatically relieved of some of its load.

6. As the blood pressure reacts to these manœuvres and becomes lower and the left heart is thereby relieved, it is capable of recovering, and of maintaining that recovery for some time, drawing through from the lungs the surplus blood which is distending the lung capillaries and threatening the patient's life, and so furnishing an opportunity for the balance of output of both sides of the heart to be restored.

CORONARY OBSTRUCTION.*

BY

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SUDDEN occlusion of a coronary artery is a grave accident, which in some instances at least has been proved at autopsy to lead to gradual or rapid necrosis of the myocardium. The diagnosis of the condition during life is not easy, but I venture to suggest that it gives rise to a definite and recognisable syndrome.

Rather over twenty years ago I was attending an old clergyman with a high blood pressure and thick arteries for a stroke of the thrombotic type, when he had a severe attack of substernal pain, followed by the development of an acute pericarditis. The obvious interpretation of these facts was that the same thing had happened in his coronary circulation as that which had already occurred within the arteries of his brain; in both an artery had become obstructed, and the area supplied had undergone some degree of necrosis. However, he recovered, and I had no other experiences of the kind for some time, except that two or three years later a gentleman of 60 odd, to whom I was called as he was dying in the street after what appeared to be a severe anginal attack, proved to have a rent in the wall of his right ventricle which apparently arose out of a similar necrotic process. This, again, recalled the case of a man admitted to St. Mary's Hospital

* A Paper read to the Bath and Bristol Branch of the British Medical Association, October 26th, 1927.

while I was a student. He also was elderly, and after a very bad bout of anginal pain—I can still recollect the pallor of his face and his expression of extreme suffering—developed a friction rub over his heart. The area of this increased rapidly, and he died in four or five days, the autopsy revealing in his case also a tear about an inch long in the wall of the right ventricle.

When in 1911 Hochhaus[1] and in 1912 Herrick[2] published papers describing the clinical picture displayed by patients in whom sudden coronary obstruction was found to have occurred, it was clear that my surmise about the original patient had been correct; but although I have since that time made a diagnosis of coronary obstruction in 36 patients, more than half of whom have died within the year, it is a most curious fact that there has not been a single post-mortem examination. Nevertheless, I feel sure that the diagnosis is well founded, for many papers have since been published, in this country[3] and elsewhere, but more especially in America, proving that there is a real and constant relation between the syndrome that I am about to describe and sudden or rapid occlusion of a coronary artery.

In all the 36 patients to whom these observations refer the first phase of the attack has been a paroxysm of substernal pain. Usually it is behind the manubrium, occasionally beneath the xiphisternum. When its centre is epigastric the pain may be misinterpreted as gallstone colic, or as some form of acute dyspepsia. From this central origin it radiates into the arms, the neck, even into the lower jaw, showing in all these situations a predilection for the left side. Occasionally, also, it is felt between the shoulders. It is usually agonising and terrifying, having in it an element of that sense of oppression which made " peine forte et dure "

so inhuman a punishment. In 17 instances the patients had had no previous experience of similar pain, and in 8 others only during the previous few days or weeks. Usually the attack begins without obvious provocation ; often, indeed, it came on while the patient was in bed at night.

Two things strike one as soon as one sees the patient : his expression of intense suffering and his pallor. I find that some such adjective as "pallid," "ashen," "livid" appears in my notes of all but two cases. The picture is not easily forgotten. The patient lies motionless, his face quite colourless and bedewed with sweat, his expression that of one who is either enduring torment or anticipating a repetition of it. In 11 cases there was vomiting in this early stage, and in two hæmoptysis, facts which served to obscure rather than to enlighten the diagnosis.

But it is the subsequent evolution of the attack which makes diagnosis possible. In several patients within a few hours after the onset, more often perhaps after an interval of one or two days, there were added to the initial pain and collapse evidences of gross injury to the cardiac wall. The most characteristic picture displays signs not only of serious myocardial disease, but also of pericardial inflammation. In 16 of my 36 patients friction was noted over the præcordium, usually beginning a day or two after the onset of symptoms and disappearing inside a week. Some direct evidence of a grave myocardial lesion was manifest in nearly every case. The function which appeared to suffer most often was the contractile power of the left ventricle. The heart sounds were noted to be weak in 25 instances. This enfeeblement develops rapidly and may be most striking, the sounds becoming quite inaudible in some cases. If the attack runs a favourable

course, the sounds recover their strength in the space of two or three days.

Beside mere weakening, the sounds may exhibit other changes indicative of an extreme degree of contractile failure. A triple cantering rhythm was heard in 10 of my cases; in several embryocardia was noted; and in 5 a systolic murmur developed at the apex. Two other signs of ill omen in that they indicate a failure of ventricular force are detected by the use of the sphygmomanometer. In 16 of my patients the pulse was alternating at some stage of the attack, the degree of alternation being so slight in most instances as to escape detection except under the test of auscultation over the brachial artery distal to an inflated armlet. Even more ominous, perhaps, is a sharp fall in the blood pressure. This was noted in 17 of my 36 patients. What is most characteristic is a fall in the systolic pressure out of proportion to the fall of diastolic pressure. For example, in one patient the reading at the beginning of the attack was 130 mm. Hg. systolic, 80 diastolic, while a few weeks later the systolic pressure had fallen to 100, while the diastolic figure remained at 80. Even where comparison with an earlier measurement is not possible, the discovery of an abnormally narrow pulse pressure is highly significant. Another sign of acute ventricular distress is a rapid increase in the area of the cardiac dulness, similar to that which is sometimes seen in diphtheria and in acute rheumatic carditis. In one instance examination of the patient six or seven weeks after the initial pain disclosed an area of heaving pulsation in the first, second and third left intercostal spaces extending from the sternal border as far as the anterior border of the axilla. In the same area a diastolic shock was felt and the percussion note was dull. There was little doubt in my mind that these

signs pointed to the development of an aneurysm of the cardiac wall, but unfortunately no autopsy was possible when the patient died six months later.

Other interesting and significant proofs of myocardial damage were noted in some of my patients. Five of them developed the total arrhythmia characteristic of auricular fibrillation. In two there was a bradycardia that was almost certainly indicative of auriculo-ventricular block, and in another a speeding that suggested the onset of auricular flutter. In none of these patients was it possible to apply graphic methods at the time of the disturbance. Unfortunately, it was impossible to subject most of these patients to electro-cardiographic examination, and I have therefore no evidence of this kind to offer you. Neither have I made systematic blood counts, but those who have done so find that the polymorphonuclear leucocytes are appreciably increased in many cases. Libman[4] has shown that this leucocytosis may persist after other signs of actual myocardial destruction have died away. Slight fever is by no means uncommon; it was noted in 8 of my 36 patients, and might doubtless have been found in others if it had been possible to make a chart extending over the whole attack in every case.

In several patients the phase of convalescence has been complicated by the development of physical signs at the bases of the lungs that are suggestive of an imperfect consolidation. The course followed, however, has been that of massive collapse rather than of a pneumonic infection.

It is remarkable that it should ever be possible to recover from so calamitous an experience as this. Yet exactly one quarter of my patients have made a recovery which appears to stand the test of time. Of the 27 who did not survive, rather more than half

succumbed without having recovered enough to get up and about again.

There are a great many points of interest that lend themselves to discussion. For instance, there is the fact that in these, which are to all intents and purposes attacks of angina with an anatomical basis, that basis is cardiac and not aortic. To my mind this piece of evidence goes far to settle the old controversy about the site of anginal pain in favour of the cardiac as against the aortic view. Another consideration of some practical importance is the possibility of foreseeing the liability of any given patient to catastrophes of this sort. If there had been time I should have liked to offer you some account of mistakes made over the diagnosis of cardiac pain, mistakes which have been rudely corrected when patients who had been thought to owe their attacks of pain to some source that was not the heart have died suddenly, or at all events under circumstances very strongly suggestive of coronary obstruction. Three or four of these people have been young or in early middle life, and have shown no sign of cardiac disease. Conversely, I have known a patient who had recovered from an attack of coronary obstruction to have subsequent attacks of cardiac pain without evidence of added injury to the heart muscle.

There is only time to discuss briefly one other side of this topic, that of causation. Of my 36 patients 29 were men, 7 only being women. In 29 instances the type of heart disease present was labelled by me as senile, and in 4 as hyperpietic. By a curious coincidence the first and the last patients in this series were father and son, the latter presenting, at the age of 45, a remarkably thick and hard brachial artery and a systolic blood pressure of 210. There were only two other patients under the age of 50, and in both of these

there was a hint of an infective element in the obstruction, for one was the subject of a chronic *B. coli* cystitis, the other of an acute erysipelas. Six of them were between 50 and 60, seventeen between 60 and 70, six of them between 70 and 80, and three of them over 80. I was surprised to find so striking a testimony to the importance of age as a predisposing factor. Tested from the opposite point of view, this fact still holds good. Nearly 15 per cent. of a series of cases of senile heart disease exhibited symptoms of sudden or acute coronary obstruction, of patients with myocardial degeneration associated with high blood pressure less than 3 per cent., while of those with cardiac syphilis not a single one betrayed any sign of this complication. The preponderating value of senile degeneration as a causal factor is strongly in favour of the view usually held that regards these obstructions as due to thrombosis. The improbability of an embolic origin is attested by the fact that I have seen no example of this syndrome among patients suffering from ulcerative endocarditis or from rheumatic heart disease.

In four patients other thromboses had occurred at or near about the same time, thrice in the veins of the lower limbs and once in the arteries of the mesentery and left arm. Finally, there was the case of a man of 49 who struggled through a most alarming attack which developed during the decline of a very severe facial erysipelas.

I should have liked to include a discussion of other types of coronary obstruction. There are those in whom death occurs so rapidly as to preclude an accurate diagnosis. In others, again, the obstruction develops so slowly that it is not accompanied by pain or other striking symptoms, and it is only disclosed later at an autopsy. As this paper is purely clinical, it takes no

cognisance of such facts as these, except to remark that my experience has been true to type, since it has included examples of failure to diagnose both of these kinds of obstruction.

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THE PATHOLOGY OF CORONARY OCCLUSION.*

BY

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ALTHOUGH coronary occlusion is so frequently a cause of sudden or rapid death, it is a commonplace post-mortem observation that the heart muscle may appear normal in spite of gross sclerosis of its nutrient vessels. Even when this has produced widespread muscular cicatrisation, the age of the lesion leaves one in no doubt, not only that occlusion of a large coronary branch is often recovered from, but that the crippled heart may continue to beat for months or years after such a catastrophe—long enough sometimes for the intra-ventricular pressure to stretch the scarred walls into an aneurysmal sac.

Two fundamental problems present themselves for solution in considering the pathology of the condition; the exact cause of the sudden or rapid cardiac asystole that terminates a majority of cases, and the reason why other hearts recover from degrees of occlusion which prove fatal to the majority. In attempting to answer these questions it must first be decided to what extent the coronary arteries anastomose—a question which has been hotly debated for a hundred years.

Forty years ago Cohnheim[1] profoundly influenced

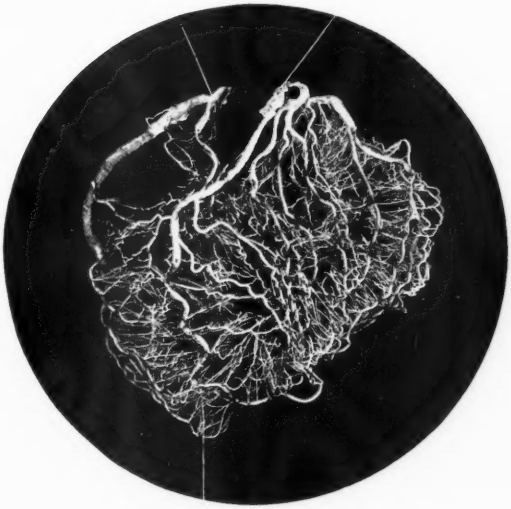
* A Paper read to the Bath and Bristol Branch of the British Medical Association, October 26th, 1927.

pathological opinion by publishing the results of his classical experiments in which the main branches of the coronary arteries were clamped in curarised dogs. The invariable result was to bring the heart to a standstill in diastole in two minutes or less. He therefore thought that no anastomoses existed between the coronary vessels, and stated that if anastomoses are present they must be of capillary calibre. The injection experiments of the time failed to show anatomical anastomoses with any degree of certainty, and for many years pathological teaching explained the asystole of coronary occlusion by assuming the production of absolute muscular ischæmia in the whole territory of the blocked vessel.

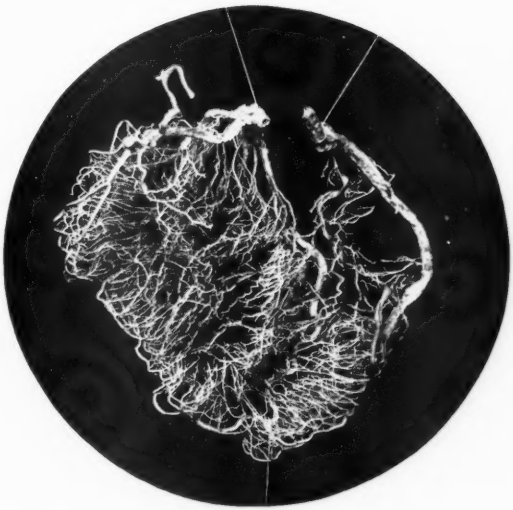
Experimental and morbid anatomical evidence then slowly accumulated which cast doubt on this assumption. It became apparent that obliteration of a coronary vessel may be followed by little or no structural change and by no obvious symptoms; that in other instances a lesion appears which is almost invariably smaller, usually much smaller, than the territory supplied by the blocked vessel; and that the blockage may produce symptoms of every degree of severity from temporary indisposition to instantaneous death.

In 1907 Spalteholtz, applying his injection and clearing technique to the study of the coronary circulation, claimed to have demonstrated that no end-arteries exist in the heart, and that there are rich anastomoses in all its muscular and endothelial layers. Cohnheim's clamping experiments were repeated, avoiding much of the trauma he inflicted, dispensing with curare and using ether, strophanthin and more careful surgical technique. The low mortality of 8·7 per cent. for ligature of the main anterior descending

PLATE XIII.



(*a*)



(*b*)

FIG. 1.—*The coronary circulation, injected with a celloidin mass, showing free anastomoses between the two sides.*

(*a*)—From the front. (*b*)—From behind

PLATE XIV.

FIG. 2.—*Skiagram of the coronary circulation injected with bismuth-gelatin mass. Heart viewed from behind.*

branch of the left coronary artery was obtained by Miller and Mathews.[2] The mortality after tying the circumflex branch of the left coronary was reduced from 100 per cent. to 80 per cent., and to 20 per cent. for the right coronary. In all these experiments any lesions produced were appreciably smaller than the territory of the occluded vessel, except where the animal had lost much blood or where the blood pressure was lowered.

Conclusive evidence was then brought forward by Louis Gross,[3] who used a standardised injection technique, employing a radio-opaque bismuth injection mass, and either clearing the specimen or taking stereoscopic skiagrams. His published results leave one no alternative but to accept his statement that "the heart is perhaps the richest organ in the body as regards capillary and precapillary anastomoses between branches of the same main vessel and between branches from the two sides." We have obtained similar results to these by using the celloidin technique of Morison[4] followed by corrosion of the specimen in strong acid. Fig. 1 is a photograph of a preparation made by Dr. C. B. Perry in the University Cardiac Research Centre at the Bristol General Hospital. It was obtained by injecting the coronary system with X-ray film dissolved in acetone, followed by corrosion of the muscle in 25 per cent. commercial hydrochloric acid. Fig. 2 illustrates Gross's method of research, being a skiagram of a heart injected with a bismuth-gelatin mass at 300 mm. Hg. and subsequently fixed in formalin.

The existence of these anastomoses between individual branches of the coronary arteries and between the vessels of the two sides thus explains satisfactorily the recovery that may follow a large

coronary occlusion in some cases. It also shows that muscular ischæmia is not the deciding factor in the production of the rapidly fatal ventricular fibrillation which so often ensues. Sudden or rapid death must therefore be due to failure of the anastomoses, rich as they are, to keep up the constant and enormous demand for blood which the heart makes on its nutrient vessels, the blood flow through which may reach $1\frac{1}{2}$ litres per minute, or two or three times the volume of the heart itself (Hill).

Another factor of considerable importance is the systemic blood pressure at the time of the occlusion. As the blood pressure was lowered in experimental animals, larger and larger lesions were obtained by ligature, until a point was reached when the resulting infarct approximated closely to the territory of the ligatured vessel.

Variations in the anatomical distribution of the coronary vessels, which are often found, probably account for recovery in some cases and a fatal result in others. Fig. 3 shows the average distribution of the main vessels—the heart being viewed from behind. The main vessel of the left side is the anterior descending branch, the circumflex artery terminating as the posterior descending branch, which is relatively small. The right coronary continues as a stout vessel to the back of the heart, its anterior descending branch being relatively small and its posterior descending branch relatively large. Fig. 4 shows a common variation in which the left circumflex continues as a large vessel ending in a large left posterior descending branch, supplying a considerable part of the right ventricle, whilst the corresponding right posterior descending branch is small. An individual in whom this variation occurs has therefore a comparatively

small right posterior descending branch to call upon should any of the main vessels in the left side become occluded.

One of the most interesting results of Gross's researches into the blood supply of the heart concerns the age changes which normally occur in the coronary circulation. The accumulation of epicardial fat adds to the heart a vascular sheath which slowly grows in thickness with age and makes anastomotic communications with the underlying muscle. The injection experiments we have carried out show this clearly, and there is little doubt that, provided the occlusion be slowly produced, without a serious concomitant fall in blood pressure, the anastomoses

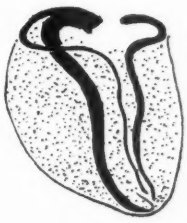


FIG. 3.

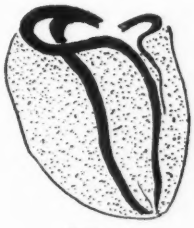


FIG. 4.

in the epicardial fat of the senile heart help it to compensate to a considerable degree for a diminished flow through its athero-sclerotic vessels.

The lesion responsible for the narrowing or occlusion of the vessel is usually atheroma, and there is frequently a degree of calcification in the walls of the affected vessel rarely met with in visceral arteries of the same calibre in other situations. The calcification, although primarily sub-intimal, often equals in intensity the medial calcification which affects muscular arteries of the limbs. It is surprising how localised this deposit of mineral salts may be, and how frequently it affects

the first inch of the anterior descending branch of the left coronary and almost spares the rest of the vessel.

Although a less common cause, syphilitic arteritis accounts for a number of cases. Mesaortitis may occlude at its origin a coronary artery which is normal through the rest of its course, the orifice of the vessel in one of the sinuses of Valsalva being sometimes difficult to find in the midst of dense syphilitic scar. Should the mesaortitis be localised, this type of occlusion is easily overlooked, but is of obvious medico-legal importance.

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TWO CASES OF ANGINA PECTORIS FOLLOWING SEPSIS.[1]

BY

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Two cases which have recently come under my observation seem to favour the view that severe sepsis may predispose to angina pectoris.

The first case was that of a professional man who had lived a very healthy life, simple in his diet and abstemious both as regards alcohol and tobacco. His children are all grown up and healthy, and syphilis may be excluded as certainly as it ever can be without Wassermann tests. The one possible factor present known to play a part in the ætiology of angina pectoris was that he had many and prolonged worries.

In the early part of 1922, when he was just under 60 years of age, he was accustomed to walk up steep paths on a hill-side without breathlessness or unpleasant fatigue. Later in this year he developed a boil upon his lip causing enormous swelling of the face, so that one eye was closed. This took some time to heal, and he was very weak afterwards. He next had a septic finger, and this lasted a few weeks whilst he tried to continue his professional work. Hardly recovered from this, he developed a severe sepsis within a tight phimosis. I was asked to see him after he had had the condition for about three weeks, during which time his doctor had slit up the prepuce. The patient was in a very toxic condition, febrile, anæmic, weak, and had lost flesh considerably. Convalescence was slow. I saw him again about six weeks afterwards, as he complained of discomfort in the cardiac region with a peculiar sensation in the left arm. His pulse was soft, regular and of medium volume, with no thickening of the artery walls to be detected by the finger, and the systolic blood pressure was

[1] A Paper read to the Bath and Bristol Branch of the British Medical Association, October 26th, 1927.

slightly over 130 mm. Hg. On first examining the heart it was two finger-breadths outside the nipple line, but after examining the lungs and returning to the heart the left border was in the nipple line and the heart beat had slowed down to normal. After this he was much better for some months.

In April, 1924, he changed his residence. In June he had just attended a meeting in which he had to take an active part, and he had his first severe attack of angina. His family were thoroughly frightened by the severity of the attack and his condition after it. I again saw him soon after this. His pulse, blood pressure and heart were much as before, but the enlargement of the heart under examination was accompanied by irregularity of the beat and was slower in subsiding, nor did it quite come back to the nipple line. Under treatment he was much better for a month or so, but found that he had to move with great caution and avoid any emotion. In August he had another attack and died in a few minutes.

The second case was that of a carpenter, still living, now aged 43. He had been in the Navy for ten years. Except for a fracture of a collar-bone he had been quite healthy.

In January last he had a suppurating olecranon bursa opened in the casualty department at the General Hospital. Next day his temperature was just under 102° F., the hand and arm very red and swollen, and he was admitted under Mr. C. A. Moore. Four incisions had to be made in the left arm and forearm. The organism present was a streptococcus. The temperature remained normal or subnormal after four days, but the swelling had not entirely subsided until the tenth day. He was an in-patient for a fortnight, and when he left one incision was still discharging. He states that he was attending for some six weeks or more as an out-patient, and that he has only worked for one month since the septic infection occurred. He came under my care in June, and the following history was obtained.

A fortnight before admission he developed pneumonia, with very high temperature and delirium for several days. During this time severe vomiting attacks came on, and for four days he could retain no food. With the fall of the temperature the vomiting stopped. Four days before admission he vomited a clot of brown-coloured blood "the size of a kidney." This was followed by melæna. This was his first hemorrhage, although he had been subject to abdominal pains for a long time, nor had he vomited before having the pneumonia. He had pain whether he took food or not, but food

aggravated the pain. The right lung was not yet quite normal. The heart was normal in size and there were no murmurs. No visible impulse, the pulse soft, regular and no thickening of the artery. Heart sounds, distant.

He was given the Lenhartz diet, interrupted on the sixth day for examination of the fæces for occult blood (negative) and for an X-ray examination of the stomach. Dr. Bergin's report is as follows: "*Stomach.*—Whole lower half of stomach in constant deep spasm—will not fill out. Point of maximum tenderness near pyloric canal. *Duodenum.*—Hangs down and is in spasm, tender to palpation. Meal being evacuated rapidly." Ten days later he reported: "*Stomach.*—Much less irritable than on former examination. Peristalsis regular and even, not excessive. No spasm. *Duodenum.*—Acting normally." The patient was in hospital for one month, and left after being up and about for two or three days and without pain.

He was again admitted on September 29th for anginal attacks. Five weeks before admission he woke up in the morning with a severe pain over the heart. This lasted ten minutes. A fortnight later he had a similar attack, and three attacks during the week. A few very slight attacks occurred during the following week. On the 21st he had a bad attack, during which the pain went down the left arm; went to work but collapsed on the way. His doctor sent him to me on the 26th, there having been a severe attack lasting three-quarters of an hour.

The notes taken on admission say that "he now has no abdominal pain and the tongue is clean. Lies propped up in bed, as lying down brings on the pain. The heart on examination was as when last in hospital, and the pulse also. He says that any exertion or excitement brings on the pain. This extends down to the two inner fingers of left hand." He had two attacks following a medical examination on the 3rd of October. In one of these attacks he was thought to be dying. On the 4th he had several rather bad attacks, but felt quite well next day. He continued to have attacks, though less severe, until he was given theobromine 10 grains thrice daily, since when he has had no attacks of any kind, but any slight exertion still brings on obvious dyspnœa. A further X-ray examination showed no dilatation of the lower end of the œsophagus.

Dr. Coombs, since then, has been good enough to examine him, and confirms the absence of cardiac signs of disease when

the patient is at rest. Dr. Herapath most kindly examined the patient with the electrocardiograph, and reports that the electrocardiograms are normal.

My reason for bringing forward these two cases has been to suggest that severe sepsis may predispose to angina pectoris. These two cases are, of course, insufficient evidence to prove any causal relationship. The first case occurred in a man of 62, who had lived a full life of great responsibilities with their accompanying anxieties and worries. The second patient had pneumonia, and probably gastric ulcer also, and I do not consider that a blood Wassermann test is sufficiently conclusive evidence to exclude syphilis absolutely.

In the new edition of his text-book, F. W. Price[1] puts amongst the predisposing causes heredity, the male sex, mental wear and tear, gout, syphilis, rheumatism, some of the acute infectious diseases, especially influenza and enteric, alcohol, and perhaps tea, coffee and tobacco. Arterial disease predisposes and is present in the majority of cases, and in many there is an abnormally raised blood pressure.

I do not know whether the sepsis in the bursa had anything to do with the occupation of the second patient, but should sepsis come to be a recognised cause of angina pectoris, then the medico-legal importance of this connection is obvious. Whilst I recognise that "angina pectoris gravior" is but the name of a fairly well-defined symptom occurring in more than one variety of heart disease, it is, in the great majority of cases, a symptom of cardiac conditions incapacitating a man for work.

[1] F. W. Price (Ed.), *A text-book of the Practice of Medicine*, Ed. 2, 1926, p. 887.

THE HEALTH OF THE NATION[1]—A REVIEW.

By The Editor.

It is greatly to the reader's advantage that Colonel Fremantle is a practised writer as well as a Member of Parliament and a medical officer of health. Those of us who have enjoyed his former book, *A Doctor in Khaki*, will approach his latest volume with a bias in its favour. But it requires no preconceived good opinion of the author to make his *Health of the Nation* interesting. At the present time, when the health services and the hospitals of this country are the objects of much public discussion, it is obvious that the majority of people who express vigorous and partisan views would cut a poor figure if called upon to pass an examination in the subjects with which Colonel Fremantle's book deals. This small and readable volume presents a complete survey of the way in which the people's health in England, Scotland and Wales is protected. The Minister of Health, Mr. Neville Chamberlain, says in the Foreword: "I welcome this book as a useful and comprehensive review of the organisation and purpose of our public health service." The term public health service is not intended to bear the narrow meaning of the portion of medical work that is entrusted to medical officers of health, for this book discusses almost every provision made by private or public endeavour for the health of the individual and the community. The author is brief, clear and scarcely ever partisan, although in his chapter on industrial conditions he claims a long series of enactments for the credit of the Tory or Conservative Party. But, as the impartial observer may have noticed that the English people hardly permits any legislation to be carried into effect except when a Conservative Government is in power, the apportionment of credit is not germane to the discussion. From time to time public opinion has demanded legislation in the interests of the public health. Sometimes the demands of the public have been readily met by private charity, as in the case of our voluntary hospitals, at other times

[1] *The Health of the Nation*. By F. E. Fremantle, M.P., M.B., M.Ch., F.R.C.P., F.R.C.S., D.P.H. Pp. xiv., 209. London: Philip Allan & Co. 1927. Price 8s. 6d. net.

it has been determined by Parliament that the work demanded by public opinion falls properly into the province of the Guardians of the Poor, or of City or County Health Committees. One important department, that of medical research, has even been placed under the direct control of the Privy Council. All these matters are put out in epitomised form by the author. He has no axe to grind, nor is he advocating some sweeping alteration of our whole system, although he remarks, as any well-informed person must, that our present system is no system at all, but a chance collection of disconnected efforts for the common wealth and health. It needs no great measure of prophetic wisdom to forecast that some co-ordination of these separate and occasionally conflicting efforts is bound to come. We have seen our Navy evolved out of mere gatherings of merchant shipping armed in haste for particular occasions, our Army from bands of noblemen's private retainers, and our Post Office from the attempts of private carriers to serve the public needs. It should cause no astonishment if private enterprise in the care of the nation's health is supplemented or replaced by public undertakings. Colonel Fremantle does not envisage a time when the voluntary system of hospital management will be abandoned, he agrees with the findings of Lord Cave's Committee in 1920, that the voluntary system " with its greater efficiency and economy, its gratuitous services, especially in the training of doctors and nurses, and the sympathy it evokes from the public " is well worth saving. He does not imagine that the responsibilities of other government departments, such as that of the Board of Trade for health in ships and in mines, the Admiralty and the War Office for health in the fighting services, and the Board of Education for health in schools can be transferred with advantage to any one minister. " But," he writes, " a proper revision of the health functions of all government departments and the institution of an effective liaison between them in a common effort under a common strategy, directed by the Minister of Health, is an imperative necessity of the times." This conclusion surely has the assent of everyone who is concerned for the health of the nation. We feel constrained to add that in our opinion the task of carrying such a liaison into effect could not be entrusted to any Minister who commands the confidence of the medical profession more completely than the present one, the Right Hon. Mr. Neville Chamberlain. If changes are to come we hope it may fall to his lot to direct and control them.

Reviews of Books.

Diseases of the Nose, Throat and Ear. Second edition. By several authors. Editor: A. Logan Turner, M.D., LL.D., F.R.C.S.E. Pp. xxiv., 440. 234 illustrations and 12 plates. Bristol: J. Wright & Sons Ltd. 1927. Price 20s.—It is seldom that we find a volume that merits unstinted praise, which sends us hunting the dictionary for superlatives. Such is this. Under an inch and a half thick, in octavo, it gives a comprehensive survey of its subject. The commoner affections are well described, with their course and treatment; considerable detail of operative procedure is available to the reader. The most modern methods are discussed, and even the most difficult and recondite questions find their place: for example, the differential diagnosis between a tumour of the cerebellum and one of the eighth nerve. The illustrations are numerous, well chosen and excellently produced, the typography makes for pleasant reading and a complete index facilitates reference. The second edition is in every way a worthy successor to the first.

The Ear, Nose and Throat in General Practice. By D. A. Crow, M.B. Pp. x., 150. 44 figures. Oxford University Press. 1927. Price 10s. 6d.—It is curious that in the title of a book the phrase "in general practice" should still be thought a sufficient indication of superficial treatment. This volume really consists of six short essays on as many aspects of its subject, and a chapter, aptly named "Miscellaneous," which mentions some previous omissions. Its main fault is lack of balance. More than a quarter of the book is devoted to three methods of removing tonsils. "The Nose" receives less space than the fifteen pages allotted to endoscopic methods for foreign bodies in the gullet, etc. Chronic otorrhœa receives no mention at all, but paralysis of the œsophagus, one of the rarest conditions known, is described. The author is frankly pessimistic on the subject of deafness. With his insistence on the value of early drainage in acute otitis we agree, but to maintain that paracentesis is the only treatment appears a *reductio ad absurdum*. As an exposition of certain personal views and feelings the book is not without interest to the specialist; as a guide to the general practitioner it is wholly inadequate.

Rheumatic Diseases. By MATTHEW B. RAY, D.S.O., M.D. Pp. 91. London: Kegan Paul. 1927. Price 2s. 6d.—The author has condensed into the small space of one of the "Psyche Miniatures" a good deal of information about the nature and treatment of the "rheumatic" diseases. He has wisely chosen to arrange his matter under the classification adopted by the Ministry of Health in its report on those diseases, except that he has utilised the terms "rheumatoid arthritis, atrophic" and "infective peri-arthritis" to describe what he considers allied but distinct forms of peri-articular disease. The book is a sane and balanced summary of a subject which is much to the fore at the present time.

Orthopædic Surgery. By W. A. COCHRANE, F.R.C.S.E. Pp. xxiii., 528. Illustrated. Edinburgh: E. & S. Livingstone. 1926. Price 21s.—The author of this volume represents the best teaching of the Scottish schools combined with the famous Boston orthopædic school. The ideals aimed at in this book are very high, namely the teaching of broad principles with the addition of special knowledge. Anatomy and physiology are given great prominence as the foundation, and the stress laid upon basic conceptions is admirable. The recognition of predisposition to deformity, and its prevention, are the first tasks of every medical man in general practice as well as of the orthopædic specialist. These important subjects are fully discussed in connection with the anatomy and physiology of crippling conditions. The first part of the book deals with posture, tone, physical education and reconstruction. The second is devoted to the different parts of the locomotor apparatus. The regional arrangement is certainly convenient for reference, but does not lend itself to a scientific exposition of broad principles. The author does, fortunately, deal with poliomyelitis and with spastic paralysis in a broad manner, but should have placed these matters early in the book, and not after the regional sections, in which there is frequent need for reference to them. The subject of fractures also suffers severely from the fact that the regional classification is always round the joints. So that, for example, a fracture of the shaft of the femur receives scanty mention, while fractures of neck and condyles are only briefly described. All the ordinary deformities of the joints and of the spine are well described and profusely illustrated; this part of the book will be of the greatest value to student and practitioner.

Physical Signs in Clinical Surgery. By HAMILTON BAILEY, F.R.C.S. Pp. xv., 217. 261 illustrations. Bristol: J. Wright & Sons Ltd. 1927. Price 21s.—Nothing but praise can be given to this excellent little manual. It should be in the possession of every student starting his dressership. It will also be found extremely useful to tutors whose duty it is to teach elementary surgery. The use of the book is explained by its title. It is so well illustrated that the text is almost superfluous. At the same time the latter is clearly and concisely written, making it a pleasure to read. The photographs, which are the chief form of illustration, are excellently reproduced. The coloured photograph of traumatic asphyxia is indeed a work of art. Mistakes are difficult to find, but in Fig. 228 the knee joint should be shown fully extended instead of partly flexed. In the facsimile records the author's handwriting is a little difficult to read. The publishers are to be congratulated on their high standard of production.

Perspective in Relation to X-ray Interpretation. By WILLIAM COTTON, M.A., M.D. Third edition. Pp. 8. Illustrated. Manchester: Jesse Broad & Co. Ltd. Price 10s. 6d.—This little pamphlet enshrines the views that the author has already expressed upon numerous occasions as to the proper interpretation of skiagrams. There is undoubtedly much truth in what he says, though we do not feel that the matter is so obscure or so little recognised as does Dr. Cotton. The practitioner who constantly uses skiagraphy learns to think in terms of shadow, and to appreciate the apparent distortion of parts at its true value; few indeed would turn to Euclid, Books v. and vi. or Helmholtz's *Optics in Relation to Painting,* as the author recommends.

A Manual of General Medical Practice. By W. STANLEY SYKES, M.A., M.B., D.P.H. Pp. xi., 216. London: H. K. Lewis & Co. 1927. Price 7s. 6d.—This is a book for beginners, whom it will help. The author presents the features of disease in clear outline; for example, influenza, which he studied in the epidemic of 1924. The initial stages of appendicitis can be puzzling, and the censure of delay in diagnosis undeserved. Dr. Sykes finds the pulse a better guide than the temperature. He maintains that of all hospital appointments the most valuable to the general practitioner is the obstetric; and argues that however great the convenience of the hospital, the majority of the population are born, live, lie sick and die in their own homes.

An Introduction to the Law and Tradition of Medical Practice. By WM. SANDERSON, M.A., LL.B., and E. B. A. RAYNER, B.A., LL.B. Pp. xii., 77. London: H. K. Lewis & Co. 1926. Price 7s. 6d.—The authors have attempted in this small volume of 72 pages to cover the salient facts regarding (1) the ethics of the profession, and (2) the law as it relates to the liabilities and privileges of medical practice. A perusal of this handbook, however, shows that they are on much surer ground as lawyers in the section on law than as laymen on the subject of ethics, and the number of errors suggest that they would have been better advised to secure the collaboration of a medical man in dealing with this subject. To take one instance only, on page 23 occurs the following: "It is customary for one who practises surgery only to style himself Mr. A. B., Surgeon." They may haunt the purlieus of Cavendish Square in vain for the plate of a consulting surgeon that bears anything more than his name. Apart from these inaccuracies the book is worth purchasing for its legal summary, and might well find a place in the library of any medical man.

The Diagnosis of Pancreatic Disease. By ROBERT COOPE, M.D., B.Sc., M.R.C.P. Pp. viii., 112. London: Oxford University Press. 1927. Price 5s. net.—There is no organ of the body the diseases of which present such difficulties in diagnosis as those of the pancreas. In this short work Dr. Coope, after dealing with the anatomy and physiology of the gland, reviews the various methods of examination in pancreatic disease, clinical observation, X-ray findings, and attempts to detect failure of discharge of the juice into the duodenum. He also discusses failure of insulin production and criticises adversely the numerous indirect tests of failure of pancreatic secretion. He attaches the greatest importance to the detection in the stools of undigested muscle fibres, and gives clear and precise directions for the carrying out of this test. The author dismisses as unreliable such reactions as Loewi's and Cammidge's tests. Undoubtedly the book will be found most useful to the clinician in simplifying and clarifying the work of investigating diseases of the pancreas.

Malaria in India. By Major-General Sir PATRICK HEHIR, K.C.I.E., C.B., C.M.G., M.D. Pp. xix., 490. Illustrated. Oxford University Press. 1927. Price £2 2s. net.—This book has had a chequered career. In his preface the author tells us that during the War he lost two large boxes of MS., with

many hundreds of illustrations of which it has been impossible to secure copies. Although he does not say so, we imagine that he owes this disappointment to his share in the heroic defence of Kut-el-Amara and his subsequent experiences as a prisoner of war with the Turks. At all events the book that has finally emerged is one of which its author has reason to be proud. He has faced successfully the formidable task of surveying one of the most massive problems to which man has ever devoted his energies—the conquest of malaria. The magnitude of the problem is to be gauged from an estimate, apparently well founded, of the incidence of malaria in India, on p. 12, to the effect that the number of cases of malaria in India calling for treatment is 100,000,000 per annum. To this must be added another calculation, namely, that it is improbable that more than a fifth of affected persons ever take quinine. Almost the whole book is devoted to a consideration of the ætiology of the disease and its prevention, only a short clinical section being considered necessary. Sir Patrick Hehir quotes with approval Manson's dictum that " in serious cases (of malaria), to use any other drug to the exclusion of quinine is culpable trifling," adding that the word " quinine " must be read as a synonym for the crystallisable alkaloids of cinchona. But the aspect of the book which is of most interest is that which reveals this problem of reducing the malaria of India as one which affects every phase of Indian life. The author says of this that it is a task beyond the powers of any government. If it is to be successfully undertaken it must be by the people themselves. The plan of campaign necessary to achieve this purpose is outlined by the author in pages that no one but an expert would venture to criticise. It is obvious to any reader, however, that his propositions are based on sincerity of purpose as well as on wide experience, and we believe that the book will prove valuable not only to the medical profession but also to everyone interested in the welfare of India.

Editorial Notes.

The President in Canada.

Dr. A. L. Flemming, during his year of office as President of the Bristol Medico-Chirurgical Society, received the high compliment of an invitation from the Canadian Medical Association to deliver an address on Anæsthetics at the Annual Meeting of the Association, held in Toronto in June last. Bristol may well congratulate itself on the choice of Dr. Flemming to represent the Mother Country at this important meeting in our oldest Dominion. Dr. Flemming was greatly impressed by the cordial reception with which, as a delegate of the British Medical Association and representative of the University of Bristol, he was greeted in professional and social circles in Canada. He reports with much satisfaction that on several occasions he heard this Journal spoken of in appreciative terms.

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The Sheriff of Bristol.

Major J. A. Arrowsmith-Brown, D.S.O., has accepted the office of Sheriff of Bristol this year, and it is with particular pleasure that the Journal Committee offers its congratulations to the head of the firm of J. W. Arrowsmith Ltd., our publishers. Major Arrowsmith-Brown has, like his uncle, the late Mr. J. W. Arrowsmith, displayed the

keenest interest in the progress of the University, and as Secretary of the Colston Research Society he has worked unremittingly to promote scientific research in Bristol. His gallant record during the War and his zeal for the welfare of our city leave us in no doubt that he will occupy the ancient and royal office of Sheriff in such a manner as to enhance its dignity and win the approbation of his fellow-citizens.

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Opening of the Henry Herbert Wills Physics Laboratory.

ON October 21st the Henry Herbert Wills Physics Laboratory at the University was declared open by Sir Ernest Rutherford, President of the Royal Society, in the presence of the Chancellor of the University, Lord Haldane, and many distinguished British and foreign guests. For the foundation of this building, which is situated on the Royal Fort Estate, the late Mr. H. H. Wills gave £200,000 to the University. The Laboratory, finely designed and richly equipped, forms a noble addition to the University. There is still another important building in progress, the men's hostel at Downside on Durdham Down, which is nearly completed. Few modern Universities have buildings that can compare with Bristol's, and as succeeding generations look upon the buildings they cannot fail to speak with gratitude of the munificence of the Wills family.

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Postgraduate Medical Work.

DURING September the University Postgraduate Committee for Clinical Studies arranged a fortnight's intensive course at the Royal Infirmary and General Hospital.

The Regional Medical Officer conducted the negotiations between the Ministry of Health, the various Insurance Committees and the University.

Fifteen panel practitioners attended from the counties of Shropshire, Herefordshire, Worcestershire and Gloucestershire.

This is the second course of the kind held at Bristol. In 1926 the class was limited to Somerset.

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The Annual Service for the Medical Profession.

THE Annual Service for the Medical profession was held on Sunday, October 16th, in Bristol Cathedral. A large number of the medical and nursing professions were present. The offertory was put at the disposal of the Diocesan Board of Finance. The preacher[1] was the Right Rev. Dr. J. H. B. Masterman, Bishop of Plymouth, who took for his text the words: "What is man, that Thou art mindful of him?" (Psalm viii. 4). "The special work of doctors," he said, "brought them into contact with two sides of human nature. Their first concern was with the physical nature of man, with that nature which linked them with the whole system of organic evolution." The Bishop referred to a recent restatement of the Darwinian hypothesis, and remarked that the echo of this old controversy aroused little interest to-day. We were not profoundly interested in the ancestry of man except in so far as it had a vital bearing on his destiny. But in their contact with human nature every doctor must become in some measure a psychologist, and though scientific psychology was only in its infancy, it had at least

[1] The Report of the Bishop's sermon is taken from the *Bristol Times and Mirror* of Monday, October 17th.

taught them that soul-stuff was not resolvable into terms of matter. It was sometimes said that men had lost something of the desire for continued existence which seemed to Plato the strongest argument for immortality. He thought it was true that the best men no longer regarded the permanence of human personality as in itself the highest good. Man's right to survive depended on the belief that every personality in which the moral values had developed represented an enrichment of the ultimate reality. It was the conservation of values that was the supreme concern of the spiritual universe. So we reached the threshold of Christian theology, for it was in the Incarnation that we found the final vindication of those moral values, and salvation began for every man when he began to make those values his own. It was surely true that the Christian doctrine of the Incarnation did give to the whole world-progress a meaning and a value that we could find nowhere else. Man's ancestry went back to the dust, but his goal was the glory of God.

Meetings of Societies.

Bristol Medico-Chirurgical Society.

THE Annual Meeting was held in the Society's room at the University on October 12th, 1927, the President and sixty-six members and guests being present. Mr. A. L. Flemming resigned the chair to his successor, Dr. W. K. Wills, who delivered his Presidential Address on **"Some Developments in Dermatology during the last Thirty Years."**

BRISTOL MEDICO-CHIRURGICAL SOCIETY.

INCOME AND EXPENDITURE ACCOUNT for the Year ended 30th September, 1927.

INCOME.	£ s. d.	£ s. d.
Members' Subscriptions ..	238 16 6	
Do., outstanding for 1926-1927	29 8 0	
		268 4 6
Interest on Bank Deposits		6 9 8
		£274 14 2

EXPENDITURE.	£ s. d.	£ s. d.
Grant to *The Bristol Medico-Chirurgical Journal*		193 15 8
Librarian—Honorarium		15 0 0
University Marshal		1 0 0
Miscellaneous Expenses—		
Cadena Cafe, Refreshments	£5 7 0	
Postages and Sundries ..	7 13 10	
Printing and Stationery	34 1 6	
Audit Fee	2 2 0	
Lantern and Cinematograph at Meetings ..	3 3 0	
Lewis's Medical and Scientific Library—		
Subscription £4 4 0		
Postages .. 0 6 1		
	4 10 1	
		56 17 7
Balance, being excess of Income over Expenditure carried to next Account		8 1 7
		£274 14 2

BALANCE SHEET as at 30th September, 1927.

CAPITAL AND LIABILITIES.	£ s. d.	£ s. d.
Sundry Creditors, Audit Fee		2 2 0
Capital as at 30th Sept., 1926	25 8 8	
Add Arrears of Subscriptions paid up	407 8 0	
	432 16 8	
Balance of Income and Expenditure Account as above	8 1 1	
		440 17 9
		£442 19 9

ASSETS.	£ s. d.
Cash at Bank—Current Account ..	85 19 2
Deposit Account ..	327 12 0
Members' Subscriptions for 1926-27 outstanding	29 8 0
	£442 19 9

Audited and found correct.

BRISTOL, 8th October, 1927.

H. E. KEELER, F.C.A.

The Secretary's report and the Treasurer's balance sheets were presented and accepted, and the following officers were elected :—

COMMITTEE.

President—Dr. W. Kenneth Wills.
President-Elect—Dr. H. L. Ormerod.

Ex-officio.

Hon. Secretary—Mr. W. A. Jackman.
Hon. Medical Librarian—Dr. W. A. Smith.
Hon. Treasurer—Mr. A. E. Iles.
Editor of the Journal—Dr. J. A. Nixon.

Elected.

Mr. F. Lace.	Mr. T. Carwardine.
Mr. D. C. Rayner.	Mr. C. Ferrier Walters.
Mr. Hey Groves.	Dr. W. Vincent Wood.
Mr. Duncan Wood.	Dr. R. S. S. Statham.

University Library Sub-Committee.

Dr. W. A. Smith. Dr. G. Parker. Mr. A. R. Short.

November 9th, 1927.

DR. W. KENNETH WILLS, President, in the Chair.

DR. NEWMAN NEILD read a paper on "Interlobar Empyema," in which he stated that neither interlobar empyema nor interlobar tuberculous effusion was particularly uncommon, although the diagnosis of interlobar empyema made by the physician might be apparently negatived at the operation. A frequent course of events was as follows :—

The first passage of the exploring needle through the compressed lung left a channel for the interlobar fluid to pass into the general pleural cavity. At this primary exploration the needle passed through lung before the fluid was reached, and before this there was no Grocco's triangle to be made out. A few hours later a Grocco's triangle was well marked, and a needle inserted at the site of the first exploration obtained fluid immediately within the parietal pleura, while if the needle went more deeply still, it passed through lung and again reached fluid. At the operation for empyema fluid was found at once on opening the parietal pleura.

Skiagraphy was of very great assistance, and he described the more usual appearances. The physical signs were practically confined to the lower lobe, the middle lobe being sometimes affected. There was gradually increasing impairment of

resonance of this lobe, but an area behind and to the outer side of the angle of the scapula was much more dull than elsewhere. Whilst over the rest of the lobe breath sounds weakened until they disappeared, there was a sequence of impaired resonance, bronchial breathing, and absent breath sounds appearing from the centre of this dullest area, following each other centrifugally. At the outer limit of this area ægophony was often heard. The area ceased abruptly at the interlobar line in the axilla.

Dr. Neild illustrated his points by diagrams and detailed several cases upon which his conclusions were based. In these cases he preferred the usual operation for a general empyema to an operation at the point of greatest dullness in the axilla.

The difficulty of diagnosis based upon physical signs did not lie between interlobar and general empyema, but between interlobar empyema and "massive" pneumonia or occasional forms of pulmonary abscess.

He thought it probable that cases diagnosed as empyemata following pneumonias were frequently empyemata from the first.

The careful examination for this form of empyema would explain the cases, not uncommon amongst children, where an empyema was found, although breath sounds were still audible, though faintly, to the base. Also those empyemata that discharged through the bronchi or in the axillary region were probably interlobar forms.

He suggested that before a complete Estlander operation was performed a preliminary search should be made for a possible interlobar empyema that was preventing the expansion of the lung.

In opening the discussion on Dr. Neild's paper, the PRESIDENT alluded to the risk of hemorrhage following exploratory puncture of the chest wall.

MR. C. F. WALTERS thought that interlobar empyema often coincided with an ordinary empyema. When an interlobar empyema is explored operation should follow at once, and the needle track in the lung should be sterilised.

MR. C. A. MOORE made some comments on the surgical aspects of one of Dr. Neild's cases in support of his contentions.

DR. H. H. CARLETON said that he made it a rule not to puncture the pleura without local anæsthesia. He asked whether others could confirm his observation that where the

pleural layers adhered to each other the sensibility of the parietal layer was lost.

DR. J. R. CHARLES thought that the persistence of a relatively quickened speed of respiration might suggest the presence of a metapneumonic interlobar empyema in patients who displayed no physical signs and were too ill for screen examination.

DR. NEILD replied.

The Medical Library of the University of Bristol,

WITH WHICH IS INCORPORATED

The Library of the Bristol Medico-Chirurgical Society.

The following donations have been received since the publication of the List in September, 1927.

December, 1927.

College of Physicians and Surgeons, Columbia University (1)	1	volume
Dr. D. S. Davies (2)	1	,,
Founder and Director, Wellcome Historical Medical Museum (3)	1	,,
Henry Phipps Institute (4)	1	,,
Lister Centenary Committee (5)	1	,,
London School of Tropical Medicine and Hygiene (6)	1	,,
Dr. J. E. Mackenty (7)	1	,,
Mayo Clinic (8)	1	,,
Michell Clarke Memorial Fund (9)	3	volumes
Munro Smith Memorial Fund (10)	6	,,
Registrar-General (11)	1	volume
Rockefeller Foundation (12)	1	,,
Saito Gratitude Foundation (13)	1	,,
Mr. A. Rendle Short (14)	1	,,
Surgeon-General of the U.S. Army (15)	3	volumes
United Fruit Co. (16)	1	volume
University of Liège (17)	1	,,
Col. H. S. Wood (18)	7	volumes
Mr. A. J. M. Wright (19)	1	volume

Unbound periodicals have also been received from Col. P. Bush, Dr. Carey Coombs and Professor E. W. Hey Groves.

THE ONE HUNDRED AND TWENTY-SECOND LIST OF BOOKS.

The figures in round brackets refer to the figures after the names of the donors. The books to which no such figures are attached have either been bought from the Library Fund or received through the *Journal*.

Bailey, H. .. .. .. *Physical Signs in Clinical Surgery* 1927
Buchanan .. .. .. *Manual of Anatomy.* 2 Copies .. 5th Ed. (10) 1925
Comrie, J. D. .. .. *History of Scottish Medicine to* 1860 .. .. (3) 1927
Concise Oxford Dictionary of Current English 1926
Coope, R. .. .. .. *Diagnosis of Pancreatic Disease* 1927
Crow, D. A. .. .. *Ear, Nose and Throat in General Practice* .. 1927
Cuff, H. E., and Pugh, W. T. G. *Practical Nursing* .. .. .. 7th Ed. 1927
Dautrebande, L. .. *Troubles Circulatoires dans l'asystolie* .. (17) 1926
Evans, C. L. .. .. *Recent Advances in Physiology* .. 2nd Ed. (14) 1926
Ewart .. .. *MS. Notes on Lectures on Zoology.* 2 Vols. (18) —
Feldman, W. M. .. *Ante-Natal and Post-Natal Physiology* .. (10) 1920
Gray, H. .. .. .. *Anatomy* .. .. 23rd Ed. (10) 1926
Hehir, Sir P. .. .. *Malaria in India* 1927
Hovorka, O. von, and Kronfeld, A. *Vergleichende Volksmedizin.* 2 Vols. 1908–1909
Jackson, J. H. .. .. *Neurological Fragments* .. .. (10) 1925
Jacobi .. .. *Atlas of Dermochromes.* By H. MacCormac. 2 Vols. .. .. 4th Ed. (9) 1926
Mackenty, J. E. .. *Cancer of the Larynx* .. .. (7) [1927]
MacLagan .. .. .. *MS. Notes on Lectures on Medical Jurisprudence* (18) —
Manson-Bahr, H., and Alcock, A. *Life and Work of Sir Patrick Manson* 1927
Medical Department of United States Army in World War. Vol. II., XI., I. (15) 1927
Modern Technique in Treatment. Vol. III. 1927
Nouveau Traité de Médecine. Fasc. XXI. .. .. (9) 1927
Porter, C. .. .. .. *Elements of Hygiene and Public Health.* 2nd Ed. 1926
Portmann, G., and Retrouvey, H. *Cancer du Nez* .. .. (19) 1927
Ray, M. B. .. .. *Rheumatic Diseases* 1927
Rudolf, G. de M. .. *Therapeutic Malaria* 1927
Schwanzy .. .. .. *Diseases of the Eye.* Ed. Werner .. .. 13th Ed. 1925
Shaw, D. M. .. .. *Dental Prosthetic Mechanics* 1927
Sykes, W. S. .. .. *Manual of General Medical Practice* 1927
Turner, A. Logan .. *Diseases of the Nose, Throat and Ear* .. 2nd Ed. 1927
Turner, A. Logan [Ed.] *Joseph, Baron Lister,* 1827–1927 .. .. .. (5) 1927
Wells, H. G. .. .. *Chemical Pathology* .. .. (10) 1925

TRANSACTIONS, REPORTS, JOURNALS, ETC.

Acta Pathologica et Microbiologica Scandinavica. New journal. Vol. 1 (1924). Vol. 3 (1926) and in continuation.
Annual Report of the Medical Officer of Health, Bristol .. .. .. (2) 1926
Collected Papers of the Mayo Clinic. Vol. 18 .. .. (8) 1926
Henry Phipps Institute. 19th Report .. .. (4) 1927
Index Catalogue Surgeon-General Office United States Army. 3rd S. Vol. 6 .. .. (15) 1926
London School of Tropical Medicine. Collected Essays. Vol. 3 .. (6) 1926–27
Progressive Medicine. Vol. 3. 1927 1927
Quarterly Cumulative Index Medicus. Vol. 1. 1927 1927
Registrar-General's Decennial Supplement. England and Wales. Pt. I. .. 1927
Registrar-General's Statistical Review. England and Wales. Tables. Pt. I. Medical for 1926 (11).

Registrar-General's Statistical Review. England and Wales. Tables. Pt. II. Civil for 1926. (11).
Rockefeller Foundation. Annual Report .. .. (12) 1926
St. Thomas's Hospital Reports. Vol. 49 (1925) 1927
Saito Gratitude Foundation. Monographs. No. 2 .. .. (13) 1927
Studies from Department of Pathology, College of Physicians and Surgeons, Columbia University. Vol. 20 (1) 1925–1927
Surgical Clinics of North America. Vol. 7. Nos. 3 and 4 1927
Transactions of College of Physicians, Philadelphia. Vol. 48 1926
United Fruit Co., Medical Department. 15th Annual Report .. .. (36) 1926

Local Medical Notes.

Royal College of Surgeons of England.—The Thomas Vicary Lecture for 1927 was delivered on November 3rd by Dr. George Parker, Consulting Physician to the Bristol General Hospital, whose subject was "The Early Development of Hospitals."

Bristol General Hospital.—The following appointments have recently been made :—Consulting Physician : Dr. J. O. Symes. Physician : Dr. Carey Coombs. Assistant Physician : Dr. J. Anthony Birrell. Assistant Surgeon in the Ear, Nose and Throat Department : Mr. Gordon R. Scarff. Assistant Pathologist : Dr. H. Rogers.

Bristol Royal Infirmary.—C. C. Ross, M.D. Manitoba, F.R.C.S. (Edin.), has been appointed Senior Resident Officer.

EXAMINATION RESULTS.

University of Bristol.—Students of the University have recently passed the following examinations :—

M.B., Ch.B.—*Supplementary First Examination. Pass :* R. N. O. Burns, R. G. C. G. Carlson, J. D. Hughes, J. J. Kempton, J. Ridgway. *In Physics and Biology only :* J. F. H. Eagles.

M.B., Ch.B.—*Final Examination (Part I.), including Forensic Medicine and Toxicology. Pass :* R. A. S. Cory, A. A. Dowling, G. R. Fells (with distinction in Forensic Medicine and Toxicology), A. C. Fisher, N. D. Gerrish, R. J. Krogh, K. H. Pridie (with distinction in Materia Medica, Pharmacy, Pharmacology and Therapeutics), H. D. Pyke, N. C. Tanner (with distinction in Materia Medica, Pharmacy, Pharmacology and Therapeutics), L. E. Vine, G. J. West. *Part I. only. Pass :* Jean Armstrong, T. Evans, A. C. Price.

M.B., Ch.B.—*Final Examination (Part II.).—Completing Examination. Pass :* G. D. J. Ball, T. A. Brand (with

distinction in Public Health), J. E. Martin, Dorothy M. H. Tripp, A. R. Williams. *In Group I. only:* D. E. C. Andrew, T. L. Cleave, A. J. M. Grimston, Phoebe C. Vine.

SUPPLEMENTARY PRELIMINARY SCIENCE EXAMINATION FOR DENTAL STUDENTS.—*Pass:* Helena C. L. Blinkworth. *In Physics (completing Examination):* H. L. Saunders.

B.D.S.—*Supplementary First Examination. Pass:* M. J. Ryan.

L.D.S.—*Second Professional Examination. Pass: In Dental Materia Medica (completing Examination):* L. W. G. Jones. *In Dental Metallurgy and Dental Mechanics only:* Barbara J. Shapland. *In Dental Materia Medica only:* A. N. Moon, T. A. Satchwell, C. G. Westlake.

L.D.S.—*Final Professional Examination. Pass:* E. C. Browne, A. L. Gilchrist.

University of London.

M.D.—J. A. James, B.S.

Conjoint Board.

M.R.C.S., L.R.C.P.—T. I. Hughes.

L.D.S., R.C.S.—*First Professional Examination. Part I.:* J. D. Sellers, A. H. V. Williams. *Part II.:* M. E. Minton, J. P. Price, J. D. Sellers. *Part III. (a):* A. H. V. Williams, G. H. Dakers, Q. A. Davies, T. A. A. Eaves, W. F. G. Harvey, J. J. Hinton, D. R. Jones, J. K. Noot, H. J. Phillys, K. V. M. Taylor-Milton. *Part III. (b):* F. G. Lilley, L. Symonds.

The Annual Medical Dinner of the Bristol Medical School was held on Thursday, December 8th, at the Berkeley Café. A large gathering of past and present students and members of the staff assembled under the presidency of Professor J. A. Nixon, C.M.G., F.R.C.P., the guest of the evening being Col. T. Sinclair, C.B., M.P. for the University of Belfast.

After the loyal toast the President proposed the health of Col. Sinclair, introducing him as having been until recently Professor of Surgery (Queen's University, Belfast), late Consulting Surgeon in Egypt and to the Fourth Army in France, and now the first Member of Parliament to come amongst them as their honoured guest.

Col. Sinclair, in responding, proposed "The Bristol Medical School," and Col. J. Paul Bush, C.M.G., C.B.E., and Mr. R. H. Moore replied appropriately for the School.

Dr. S. V. Stock's toast of "The President" and Professor Nixon's reply concluded a most enjoyable evening.

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